

Application No. 10/024,010  
312 Amendment dated November 1, 2004  
Reply to Advisory Action dated August 6, 2004

Page 3

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (CURRENTLY AMENDED) A seed of corn inbred line designated HC53, representative seed of said line having been deposited under ATCC Accession No. PTA-5969.

2. (PREVIOUSLY PRESENTED) A corn plant, or a part thereof, produced by growing the seed of claim 1.

3. (ORIGINAL) Pollen of the plant of claim 2.

4. (ORIGINAL) An ovule of the plant of claim 2.

5. (PREVIOUSLY PRESENTED) A corn plant, or a part thereof, having all of the physiological and morphological characteristics of the corn plant of claim 2.

6. (PREVIOUSLY PRESENTED) The corn plant of claim 2, wherein said plant is detasseled.

7. (PREVIOUSLY PRESENTED) A tissue culture of regenerable cells produced from the corn plant of claim 2.

8. (PREVIOUSLY PRESENTED) The tissue culture according to claim 7, wherein the cells of the tissue culture are produced from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

9. (CURRENTLY AMENDED) A corn plant regenerated from the tissue culture of claim 7, wherein the corn plant has all of the morphological and physiological characteristics of inbred line HC53, representative seed of said line having been deposited under ATCC Accession No. ~~PTA-~~ PTA-5969.

10 - 34. (CANCELED)

35. (PREVIOUSLY PRESENTED) A method of producing a male sterile corn plant comprising transforming the corn plant of claim 2 with a transgene that confers male sterility.

36. (PREVIOUSLY PRESENTED) A male sterile corn plant produced by the method

Application No. 10/024,010  
312 Amendment dated November 1, 2004  
Reply to Advisory Action dated August 6, 2004

Page 4

of claim 35.

37. (PREVIOUSLY PRESENTED) A method of producing an herbicide resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers herbicide resistance.

38. (PREVIOUSLY PRESENTED) A herbicide resistant corn plant produced by the method of claim 37.

39. (PREVIOUSLY PRESENTED) A method of producing an insect resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers insect resistance.

40. (PREVIOUSLY PRESENTED) An insect resistant corn plant produced by the method of claim 39.

41. (PREVIOUSLY PRESENTED) A method of producing a disease resistant corn plant comprising transforming the corn plant of claim 2 with a transgene that confers disease resistance, wherein the resistance is to a bacterial disease, fungal disease or viral disease.

42. (PREVIOUSLY PRESENTED) A disease resistant corn plant produced by the method of claim 41.

43. (CURRENTLY AMENDED) A method of introducing a desired single gene trait into corn inbred line HC53 comprising:

(a) crossing a HC53 plant, representative seed having been deposited under ATCC Accession No. PTA-\_\_\_\_\_ PTA-5969, with a plant of another corn line that comprise a desired single gene trait to produce F1 progeny plants, wherein the desired single gene trait is selected from waxy starch, male sterility, herbicide resistance, insect resistance, bacterial disease resistance, fungal disease resistance or viral disease resistance;

(b) selecting F1 progeny plants that have the desired single gene trait to produce selected F1 progeny plants;

(c) crossing the selected F1 progeny plants with a HC53 plant to produce first backcross progeny plants;

(d) selecting for first backcross progeny plants that have the desired single gene trait

Application No. 10/024,010  
312 Amendment dated November 1, 2004  
Reply to Advisory Action dated August 6, 2004

Page 5

and physiological and morphological characteristics of maize inbred line HC53 to produce selected first backcross progeny plants; and

(e) repeating steps (c) and (d) one or more times in succession to produce selected second or higher backcross progeny plants that comprise the desired single gene trait and all of the physiological and morphological characteristics of maize inbred line HC53 as described in the Variety Description Information when grown in the same environmental conditions.

44. (PREVIOUSLY PRESENTED) A corn plant produced by the method of claim 43; wherein the corn plant has the desired single gene trait and all of the physiological and morphological characteristics of corn inbred line HC53 as described in the Variety Description Information when grown in the same environmental conditions.

45. (PREVIOUSLY PRESENTED) A method of producing a corn plant with decreased phytate content comprising transforming the corn plant of claim 2 with a transgene that encodes phytase.

46. (PREVIOUSLY PRESENTED) A corn plant produced by the method of claim 45 having reduced phytate.

47. (PREVIOUSLY PRESENTED) A method of producing a corn plant with modified fatty acid metabolism or modified carbohydrate composition comprising transforming the corn plant of claim 2 with a transgene that modifies fatty acid metabolism or modifies carbohydrate composition, wherein the transgene encodes an enzyme selected from the group consisting of fructosyltransferase, levansucrase  $\alpha$ -amylase, invertase, and a starch branching enzyme, or the transgene encodes the antisense of a steryl-ACP desaturase gene.

48. (PREVIOUSLY PRESENTED) A corn plant produced by the method of claim 47 having modified fatty acid metabolism or modified carbohydrate composition.